

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA  
SECOND APPELLATE DISTRICT  
DIVISION ONE

LORI BARBER et al.,

Plaintiffs and Appellants,

v.

SOUTHERN CALIFORNIA  
EDISON COMPANY,

Defendant and Respondent.

B305585, B305587

(Los Angeles County  
Super. Ct. Nos. YC066729,  
BC497689)

APPEAL from judgment of the Superior Court of Los Angeles County, Amy D. Hogue, Judge (case No. YC066729); William F. Highberger, Judge (case No. BC497689). Affirmed.

Stolpman Law Group, Thomas Stolpman; Law Office of Valerie T. McGinty and Valerie T. McGinty for Plaintiffs and Appellants.

Southern California Edison, Leon Bass, Brian A. Cardoza, Carla M. Blanc; Munger Tolles & Olson, E. Martin Estrada, Mark R. Yohalem, Jeremy A. Lawrence, Nicholas D. Fram, Ginger D. Anders; Limnexus, Arnold Barba and Jane Kespradit for Defendant and Respondent.

Thomas Barber, Lori Barber, and their two children,<sup>1</sup> (collectively, the Barbers) appeal from a judgment of the superior court in the Barbers' lawsuit against Southern California Edison Company (SCE) following summary judgment in SCE's favor. The Barbers previously lived on a property on Knob Hill Avenue in Redondo Beach (the Barbers' former home), which is located a few doors away from one of SCE's electricity substations, the Topaz substation. The Barbers' lawsuit alleged that electricity from the substation caused them to experience shocks at various places on their property, and sought recovery primarily for the emotional distress they suffered as a result.

On appeal, the Barbers argue that the court (1) excluded evidence that would have created a triable issue of fact as to causation; (2) applied the wrong legal standard for causation by analogizing the case to a toxic tort suit; and (3) erred in concluding the doctrine of *res ipsa loquitor* did not establish causation. We conclude that, under the applicable substantial factor causation standard, the evidence presented on summary judgment established the Barbers could not prove causation in fact. We further conclude that the court correctly rejected *res ipsa loquitor* as a means of establishing causation in this case. We need not decide whether the court erred in excluding the evidence the Barbers identify, because even considering that evidence, the record does not create a triable issue of fact as to whether stray voltage from the Topaz substation caused the Barbers' claimed shocks. Specifically, SCE offered evidence that stray voltage shocks require certain conditions, including a certain level of voltage, and that those conditions did not exist at the Barbers' former home. None

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<sup>1</sup> Thomas and Lori Barber's children are minors, but are acting through their guardian ad litem, Lori Barber.

of the evidence the Barbers offered in opposing summary judgment—including the evidence the Barbers argue the court incorrectly excluded—contradicts or discredits SCE’s evidence on these points, nor does it include any expert opinion that SCE’s electricity caused the Barbers’ shocks. The court properly granted SCE’s summary judgment motion on this basis, and we therefore need not decide the Barbers’ additional arguments challenging other aspects of the court’s summary judgment order.

Accordingly, we affirm.

## **FACTS AND PROCEEDINGS BELOW**

### **A. Fundamentals of Electrical Distribution Systems and Electricity**

Analysis of the facts and issues in this case requires a basic understanding of electrical distribution systems, much of which is provided in a previous opinion of Division Four of this court, *Wilson v. Southern California Edison Co.* (2015) 234 Cal.App.4th 123 (*Wilson I*), which involved allegations of stray voltage at another Knobb Hill Avenue property.

“Electricity is produced at a generating plant. Because it is not economical to send electricity over long distances at low voltages, the electricity produced at the plant is stepped up through transformers to a very high voltage before it is sent out over transmission lines. A substation, such as Edison’s Topaz substation at issue in this case, receives the high voltage electricity from the generating plant and steps it down through transformers to 4,000 volts. It then sends the electricity over distribution lines out to the neighborhood power poles, where an additional transformer steps down the voltage to 240/120 volts before delivering the electricity to homes or businesses.

“In order for electricity to flow, there must be a complete circuit. In other words, when electricity is sent out from a transformer to a ‘load’ (i.e., something that is using electricity, such as a light or appliance), it must have a return path. Typically, electricity is sent over one conductor (wire), called the ‘hot,’ and returns on another conductor called the ‘neutral.’ The flow of electricity is referred to as ‘current’ and is measured in amperes (or amps) [or milliamperes (mA)]; voltage is the pressure that drives the current. The amount of current depends in part upon the amount of resistance in the circuit.

“For safety reasons, electrical systems usually are grounded. That means that at various points in the system, including at the substation, a connection is made from the neutral to the ground, i.e., the earth.” (*Wilson I, supra*, 234 Cal.App.4th at pp. 130–131, fn. omitted.) This type of distribution system—the kind used at the Topaz substation at issue in this case—is called a multigrounded neutral system (MGN). It is undisputed that MGNs are used in over 90 percent of the distribution circuits in the United States, and that they have been in use for over 100 years. “[T]he [Public Utilities Commission (PUC)] expressly requires that electrical distribution systems be grounded.” (*Id.* at p. 149.) This is “[b]ecause the earth is conductive” so a system being grounded “can provide a return path for the flow of electricity. Therefore, if, for example, an energized wire fell to the ground from the distribution lines, the earth would provide a path for the current to return to the substation, where a protective device would break the circuit.” (*Id.* at p. 131.)

An “unavoidable byproduct of grounding an electrical system” is that small amounts of electricity will go into the ground. (*Wilson I, supra*, 234 Cal.App.4th at p. 129.) “In [an MGN], there will always be some current flowing back to the substation through

the earth. This is referred to as neutral-to-earth voltage [(NEV)] and it cannot be entirely eliminated. NEV is one cause of ‘stray voltage.’” (*Id.* at p. 131.) “Stray voltage” is a technical term defined by the Institute of Electrical and Electronics Engineers (IEEE), the preeminent standards-setting body in the field. It is defined as “voltage of 10 volts or less appearing on objects that are not part of an electrical system, that can be simultaneously contacted by members of the general public.” (*Ibid.*) “Stray voltage also can be caused by wiring faults (i.e., a short circuit in which an energized conductor makes contact with a grounded surface) or corrosion of a neutral conductor.” (*Id.* at p. 131, fn. 2.) “Metal objects, such as water pipes or gas lines, that are buried in or connected to the earth will conduct electricity, so if a person in a home touched a water pipe that was energized due to NEV while also touching the earth or another conductor at a different voltage, a circuit would be completed and current would run through that person’s body. This ‘touch potential’ can be eliminated by replacing metal pipes with plastic pipes or installing isolators (such as a short section of plastic pipe) to stop the flow of electricity onto metal fixtures, or by connecting (or ‘bonding’) the two conductors to equalize the voltage between the two.” (*Id.* at p. 131.)

“The physiological effects of current flowing through a person’s body depends upon the amount of the current. According to a leading reference, a [person] who encounters a current of 0.3 milliamps (mA) would not feel anything. At 0.7mA, [a person] would feel a slight tingling; that typically is the perception threshold. At 1.2mA, [a person] would feel a shock, but it would not be painful and muscular control would not be lost.” (*Wilson I, supra*, 234 Cal.App.4th at pp. 131–132.)

## **B.     *Wilson* Case Regarding Stray Voltage in the Knob Hill Neighborhood**

The *Wilson* case provides an example of circumstances in which stray voltage can have the kind of “touch potential” described above and cause sensations or other effects in a person. (*Wilson I, supra*, 234 Cal.App.4th at p. 131.) The plaintiff in that case, Simona Wilson, lived next door to the Topaz substation on Knobb Hill Avenue near the Barbers’ former home. (*Id.* at p. 129.) SCE’s testing confirmed there were low but perceptible voltage levels in the shower in Wilson’s home, and SCE admitted this was stray voltage from NEV generated by the Topaz substation. (*Id.* at p. 137.) Indeed, the evidence presented at trial in the *Wilson* case reflected extensive and partially successful efforts by SCE to address the stray voltage issue at Wilson’s home for years before she moved into the property. SCE “had eliminated the touch potential in [Wilson’s] house in 2005, inasmuch as there were no reports of shocks from that time until Wilson remodeled her bathroom in 2011.” (*Id.* at p. 156.) After the bathroom was remodeled, Wilson began experiencing a “‘tingling sensation’” in her shower when, while showering, she simultaneously touched the metal shower pipe with her hand and the metal drain with her foot. (*Id.* at pp. 136–137.) During the remodel, the metal drain had been connected to a metal pipe that had contact with the earth without installing a plastic isolator to break the conductive connection with the earth; the shower head was not connected to the earth and was at a different voltage. (*Ibid.*)

Wilson’s case thus involved the circumstances under which a person may experience a tingling sensation or a shock as a result of stray voltage. Given this, and the testing confirming stray voltage on the property attributable to SCE, there was “no dispute” that stray current from the Topaz substation had caused the shocks

Wilson felt. (*Wilson v. Southern California Edison Co.* (2018) 21 Cal.App.5th 786, 805 (*Wilson II*); *ibid.* [“there is no dispute that there is stray voltage affecting her entire property” and “no dispute that the stray voltage has, at times, been perceptible, causing a tingling sensation or a shock”].) SCE “explained to Wilson . . . what needed to be done to eliminate the touch potential, and offered to pay for the installation of plastic isolators” (*Wilson I, supra*, 234 Cal.App.4th at p. 156), which would “stop the flow of electricity onto metal fixtures” and thereby address the issue. (*Id.* at p. 131.) “Wilson, however, refused [SCE]’s offer, insisting that [SCE] had to eliminate all stray voltage on her property.” (*Id.* at p. 156.)

Wilson sued SCE (*Wilson I, supra*, 234 Cal.App.4th at p. 139), and a jury initially found in her favor on her intentional infliction of emotional distress (IIED), negligence, nuisance, and punitive damages claims. (*Id.* at pp. 139–140.) The court reversed, directing the trial court to enter judgment for SCE on all but the nuisance claim, on which the court ordered a new trial. (*Id.* at p. 165.) As to the negligence claim, the court concluded that, “[g]iven the undisputed evidence that stray voltage is an unavoidable byproduct of grounding, which is required by the PUC, it cannot be the case that [SCE] breached a duty owed to Wilson by failing to eliminate all stray voltage at Wilson’s house, whether perceived or not.” (*Id.* at p. 155.) “Once [Wilson] reported the problem to [SCE],” however, “[SCE] owed her a duty to eliminate the touch potential.” (*Id.* at p. 156.)

Following remand, another jury found for Wilson on her nuisance claim, but the court reversed that verdict as based on irrelevant evidence. (*Wilson II, supra*, 21 Cal.App.5th at pp. 805–809.) Specifically, the court held that the jury had been permitted to consider evidence of alleged stray voltage at properties other than Wilson’s as well as incidents that occurred at Wilson’s

house before she lived there. (*Ibid.*) The court concluded that such evidence was irrelevant to whether SCE had interfered with Wilson's use and enjoyment of her property. (*Ibid.*)

**C. The Barbers' and Other Knobb Hill Avenue Residents' Lawsuits Regarding Stray Voltage**

Until 1994, SCE owned the Barbers' former home, which is near the home at issue in *Wilson*. The family who purchased it from SCE in 1994 lived there until 2010 and never complained to SCE about feeling shocks or tingling sensations while they lived there. The Barbers moved into the property in May 2010.

In October 2011, a local newspaper published an article about the *Wilson* case. Later that month, Lori Barber called SCE and asked that SCE inspect her property. SCE took stray voltage measurements and found no perceptible stray voltage at the property. The record does not include anything suggesting that, at any time prior to filing the instant lawsuit, the Barbers complained or reported to SCE that they felt electric shocks or tingling sensations at the property. The Barbers did call SCE about other issues, however, such as "sparking on the overhead power lines" and a buzzing noise outside the house. The Barbers moved out of the property in November 2011.

In 2012, the Barbers, along with 98 others residents and former residents of Knobb Hill Avenue, sued SCE in two nearly identical complaints that were designated complex and consolidated for pretrial purposes. The Barbers' operative complaint alleged causes of action for IIED, nuisance, fraud, negligent misrepresentation, battery, assault, trespass, and inverse condemnation. The Barbers claimed damages related to annoyance



and emotional distress related to shocks, personal injuries,<sup>2</sup> reduced property value, costs of moving, and minor property damage.

In May 2018, the trial court selected four households from the consolidated cases as bellwether plaintiffs, including the Barbers.

#### **D. Testimony Regarding the Barbers' Claimed Injuries**

During the discovery phase of the proceedings, the Barbers identified the conditions under which they experienced the shocks. Thomas Barber testified at his deposition to experiencing “consistent” “shocks” and “tingling” “all over the house.” “[A]t the mailbox,” he “repeatedly” experienced “a shock or tingling” that caused “[e]nough pain” to make him pull his “hand off of it.” He also experienced shocks in the kitchen “frequently enough to remember,” but could not identify where in the kitchen these occurred, or what objects, if any, he was touching at the time. He also claimed to have experienced shocks in the hallway and on the patio area, but could not recall how frequently or any further details about them.

Lori Barber experienced electric shocks “quite a few times,” “maybe 15 to 20” times, with “more than half” of those occurring “outside of the home”: “The main place was [the] mailbox.” She also testified that “one day” she and Thomas Barber were “sitting on the couch” and he told her that he “ke[pt] getting shocked.”

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<sup>2</sup> The Barbers have since withdrawn “claims of personal injury with regard to each and every cause of action” and agreed that they would be forever “precluded from offering evidence of any kind, including expert testimony, concerning or relating to any past, current, or potential future physical harm.”

## **E. Key Expert Evidence and the Court's *Sargon*<sup>3</sup> Order**

After the close of fact discovery, the parties exchanged expert reports and conducted expert depositions. Two of these experts are the focus of the parties' arguments on appeal: SCE's stray voltage expert John Loud, and the Barbers' electrical expert Jeffrey Drummond, who replaced the Barbers' original electrical expert, Donald Zipse.

### **1. *Opinions of John Loud (SCE's Stray Voltage Expert)***

As set forth above, SCE acknowledged (as it must) that the nature of an MGN system causes some amount of grounded current to "inevitably" go into the ground near a substation like Topaz. SCE's stray voltage expert John Loud thus did not dispute that there may be some stray voltage in or near that property. Rather, he concluded based on the testing of the Barbers' former home that "[t]here is nothing unusual or materially different about the levels of stray voltage at this property compared with NEV associated with [MGN] residential distribution systems across the United States of America" and that "[a]ll of the measurements at this location are consistent with normal and ubiquitous stray voltage, including NEV, and there is no indication of any electrical fault causing an elevated contact voltage."

In reaching this opinion, Loud took almost 35,000 individual measurements of the voltage present at various locations on the property where a person might be able to touch two conductive surfaces at the same time, including places where the Barbers had reported feeling shocks. He "us[ed] a voltmeter to find the highest

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<sup>3</sup> *Sargon Enterprises v. University of Southern California* (2012) 55 Cal.4th 747 (*Sargon*).

voltage locations,” and “[o]nce the highest voltage locations were found, they were used for the long-term recording.” Loud found “[n]o perceptible levels of stray voltage” at “the reported points of contact.” Mr. Loud’s investigation methodology comported with “IEEE standard 1695,” subtitled the “IEEE Guide to Understanding, Diagnosing, and Mitigating Stray and Contact Voltage” (boldface omitted), which the parties’ experts agreed is the recognized industry standard for stray voltage investigations. IEEE standard 1695 calls for testing at locations where a human might be in contact with two conductors simultaneously and using a resistor to mimic human body impedance.

Loud’s testing showed “[s]ome level” of “stray voltage” even “with the home power shut off”—a so-called dark-house test—and he acknowledged that one of the “causes” of the stray voltage was the “operation of the utility distribution system.” This stray voltage was not at a level sufficient to cause perceptible shock or cause any harm, however—even assuming the correctly conductive conditions existed. Specifically, the highest voltage measurement at the Barbers’ former home was 0.75VAC. Although the minimum shock hazard voltages vary depending on the reference source cited, none reflected in the record are below 30VAC for dry hand contact and 15VAC for wet hand contact (which is not alleged to have occurred in connection with the Barbers’ shocks). Similarly, “the highest level of current the [Barbers] could have contacted (if at all) was ~0.3mA (with a 2,000 $\Omega$  resistor), which is significantly below a variety of safety thresholds and studies addressing physiological injury due to current conduction,” as Division Four of this court has previously recognized.<sup>4</sup>

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<sup>4</sup> The human body resistor amount employed by Loud for this calculation is “conservative.” The milliamp measurements

Loud also opined that, even if stray voltage were present at higher levels, the conditions necessary for stray voltage to create a perceptible tingling or shock were not present at the mailbox, door handles, or kitchen fixtures. Plaintiffs had a freestanding mailbox connected to the ground, and the only other contact point (the ground) would be at the same voltage as the mailbox and thus unable to produce a stray voltage shock. Wooden doors “do not conduct stray voltage and are therefore not a possible stray voltage source,” so door handles affixed to them could not cause a stray voltage shock. And the “kitchen floor is an insulator and eliminates all possible current conduction into it,” excluding stray voltage as a possible cause of shocks from kitchen fixtures.

According to Loud, there are other sources besides NEV that can cause someone to experience perceptible electricity. Faulty wiring in a home’s distribution system or malfunctioning appliances are two potential sources. The most common potential source is static electricity, which has nothing to do with MGNs, NEV, or electrical wiring. Static shocks can result from countless everyday activities, such as removing a synthetic garment, petting a cat, or dragging one’s feet on carpet. These activities can build up a static charge, which may then be discharged when a person touches a single conductive or grounded surface. Loud opined that the

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taken by Loud are well below not only the minimum mA shock perception thresholds referenced in *Wilson I*, but also the minimum shock and safety thresholds in the current record. For example, “[t]he UL safety standard for setting the GFCI trip curve to protect humans against contact with 120VAC allows 6mA for approximately 6 seconds. [¶] . . . The UL threshold (UL 101) for the maximum amount of current that may be conducted into persons by appliances is 0.5mA for portable appliances and 0.75mA for stationary appliances.”

Barbers' reported shocks "were more likely than not" caused by "static electricity discharges."

## **2. *Opinions of Zipse and Drummond (the Barbers' Electrical Experts)***

Pursuant to *Sargon, supra*, 55 Cal.4th 747, the court excluded the testimony of the Barbers' initial electrical expert Donald Zipse, "to the extent it [was] offered to prove causation of harm to persons or to personal property." (See *id.* at pp. 771–772 ["the trial court acts as a gatekeeper to exclude expert opinion testimony that is (1) based on matter of a type on which an expert may not reasonably rely, (2) based on reasons unsupported by the material on which the expert relies, or (3) speculative"].)

The Barbers do not challenge this ruling on appeal. The court's ruling regarding Zipse is, however, relevant to arguments on appeal regarding the testimony of the Barbers' replacement electrical expert. We therefore briefly summarize the court's ruling regarding Zipse.

Zipse reported proposing a new law of physics in approximately 2001, pursuant to which all MGNs are inherently unsafe and "must be eliminated," because NEV in the ground is always an unsafe condition. This concept, which he referred to as "Zipse's law," was the primary basis for his causation opinions regarding the Barbers specifically. After a multi-day hearing, the court issued a detailed written ruling excluding Zipse's causation opinions, in which it explained that "Zipse's testimony only established a possibility that SCE's grounded current may have been conducted through the soil in the Knob Hill neighborhood" to the Barbers' house. Because Zipse did not analyze the soil, did not identify any conductive pathway on which current might have traveled, did not investigate the conditions of contact, and did not measure at contact points inside the Barbers' house, "his

opinion that SCE's electricity was the source of [the Barbers'] shocks or property damage [was] unsupported by evidence of the probable pathway or probable dose," and he could not say to a reasonable degree of engineering certainty that SCE caused the Barbers' shocks. Zipse's "analytical gaps" were "too great to allow presentation to the jury."

The Barbers moved to replace Zipse with a new electrical expert, Jeffrey Drummond. The court granted the motion, but given the proximity to dispositive motions, limited the scope of the testimony Drummond would be permitted to offer to the opinions offered by Zipse.

Like Zipse, Drummond had never visited the Barbers' neighborhood, never conducted any testing of the Barbers' former home or the surrounding area, including the Topaz substation, and never spoke with the Barbers or any of the other bellwether plaintiffs about their experiences there. He likewise did not review any of the schematics for the Topaz substation. Also like Zipse, Drummond did not study or determine whether there was any conductive pathway that would enable NEV to travel from SCE's distribution systems into the Barbers' former home.

Although Drummond did not expressly subscribe to Zipse's law as a law of physics, he testified at his deposition that he shared Zipse's view that "all [MGN] electrical systems must be eliminated," "all manmade neutral return current must be kept out of the earth," and "all [MGN] electrical systems [are] deficient for this reason."<sup>5</sup>

Drummond also more specifically opined that the Topaz substation is an MGN design that utilizes a "common neutral at the pole transformers," which renders the homes "a part of

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<sup>5</sup> Drummond was aware of no one in the engineering or scientific communities holding that belief beyond Zipse, Drummond himself, and Drummond's business partner.

the grounding system for the Topaz substation.” Specifically, the Topaz substation “utilizes the fixtures attached” to the surrounding homes, including the Barbers’ former home, to “return neutral currents to the substation.” These fixtures include the home’s “grounding rod, water pipes, sewer pipes, natural gas pipes,” and “the foundations of the properties, which are mainly composed of concrete,” a “conductive” material. Because a “concrete foundation is electrically continuous with the surrounding soil,” “voltages that are present outside will be continuous in the foundations” of the surrounding houses, including the Barbers’ former home.

On this basis, Drummond offered opinions potentially relevant to causation. Specifically, he opined that “there is normal neutral return currents from [the] Topaz [substation] flowing through the [p]laintiffs’ properties” and “into the [p]laintiff[s]’ homes through the service drop” and that these “increase[d] the risk of electric shocks to people” in the Knobb Hill neighborhood, including the Barbers at the time they lived there. In his report, Drummond opined that “at least some of the shocks described in testimony [of bellwether plaintiffs] were caused” by stray voltage from such NEV reaching their properties. At his deposition, however, Drummond clarified that he had not actually formed an opinion as to whether any of the shocks felt by any of the Barbers were caused by NEV from SCE.<sup>6</sup> Moreover, the view stated in

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<sup>6</sup> “Q: What about the Barber household? Did you form an opinion as to whether any of the electricity they experienced came from stray voltage or not?

“A: I don’t recall that one specifically right now.

“Q: Well, certainly it’s not in your report; right?

“A: Yeah.

his report that “at least some” of the shocks reported by bellwether plaintiffs were from SCE’s NEV was based on his general views about the risks of NEV and the fact that one plaintiff’s description of what she experienced was consistent with stray current, rather than with static electricity. Specifically Drummond opined that “in testimony, Sue Ann Calhoun[, a bellwether plaintiff who lived at a different house than the Barbers on Knob Hill Avenue] clearly describes a shock as [a] ‘tingling feeling . . . like someone is strumming on your hands’ that lasted ‘maybe for two seconds, three seconds, the actual shock of it.’ Stray current shocks are alternating current (AC) and create tingling sensations that can persist, in contrast to static electricity shocks are nearly instantaneous and cause acute pain and an audible and visible zap.” Drummond acknowledged at his deposition that he couldn’t “rely simply on . . . Calhoun’s summary of her experiences to determine whether or not what she experienced was stray voltage” and that “some of her descriptions don’t make sense” and “are completely inconsistent with the way electricity operates.”

Finally, Drummond opined that “[t]he nature of the reported sensations by” the Barbers “are consistent with stray voltage rather than a static shock,” a possible source identified by Loud as the most likely, because “[a] static shock is over in a flash as a result of near instantaneous discharge, [whereas] a prolonged two to

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“Q: So you didn’t write anything about the Barbers, whether you believe it’s probable that they experienced stray voltage; right?

“A: That’s true. [¶] . . . [¶]

“Q: Do you have any other examples from any other household [besides the Calhouns] of someone experiencing electricity in a way that you believe it’s more likely than not it was stray voltage?

“A: No.”



three second period suggests stray voltage.” “Stray current shocks are alternating current (AC) and create tingling sensations that can persist, in contrast to static electricity shocks which . . . may cause a very brief sensation and an audible and visible zap.”

## **F. Summary Judgment**

SCE moved for summary judgment on all of the Barbers’ causes of action and punitive damages request. SCE’s primary argument was that the Barbers could not prove that electricity from SCE’s system caused the reported shocks. SCE relied on the Loud’s voltage readings at reported contact points in the Barbers’ house, combined with his explanation of the need for certain conditions and levels of electricity in order for NEV to cause perceptible sensations.<sup>7</sup> The Barbers did not object to SCE’s evidence. In opposition, the Barbers submitted a declaration from Drummond, which contained the opinions outlined above, and which the Barbers argued created a triable issue of fact as to the cause of the Barbers’ reported shocks. The Barbers also supported their opposition to summary judgment with an excerpt from trial in the *Wilson* case containing testimony from two witnesses, William Perry and Michael Kellers. As described in more detail below, the court sustained SCE’s objections to Drummond’s opinions and the *Wilson* transcript and granted summary judgment in SCE’s favor on all claims.

### **1. *Exclusion of Drummond’s Opinions***

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<sup>7</sup> SCE also relied on B. Don Russell’s expert testimony demonstrating that SCE’s system was properly designed and well maintained. This testimony does not bear on the issues on appeal, however, so we do not discuss it further or summarize it in the background section above.

SCE objected to numerous aspects of Drummond's declaration. The court sustained SCE's objections on the basis that Drummond's declaration both went beyond Zipse's opinions and was itself "inadmissible under *Sargon*," because Drummond's opinions "rest[ed] on assumptions and speculation rather than evidence or scientific analysis." The court explained that, because Drummond had not inspected the Barbers' home to determine whether the conditions necessary for NEV to cause the Barbers' reported shocks actually existed, Drummond had no basis to opine that NEV caused the shocks the Barbers complained of feeling in and around their home. Specifically, the court noted that no evidence supported that a conductive pathway from the Topaz substation to the Barbers' home existed, and/or that the requisite level of voltage at contact points was present.

**2. *Exclusion of Wilson Transcript Containing Kellers' and Perry's Testimony***

Michael Kellers is a former SCE employee and a former resident of the Knob Hill Avenue neighborhood who in 2008 lived near the Topaz station. At the *Wilson* trial, he did not offer an expert opinion and his testimony was not about the Barbers' former home. Rather, Kellers testified that in "1983 or 1984" he "first became aware that stray electrical currents are emitted from [the] Topaz [s]ubstation and affect the adjacent residents" and "this voltage problem" at the Topaz substation has "been known for quite some time." Kellers "knew about the problem because" two neighbors on Knob Hill Avenue asked him to "come over and take a look" because they were "getting some shocks." Kellers further testified that "managers at [SCE] were aware of it" and the "vice president of power delivery," "Dale Schul," "knew about these incidences."

William Perry is a former employee of Southern California Gas Company (the Gas Company). He testified at the *Wilson* trial as a person most qualified for the Gas Company about voltage on a gas line. This was “not an expert opinion.” He testified that, while working as a district operations manager at the Gas Company, he became aware of “a stray voltage problem affecting the residents on [Knob Hill Avenue].” The street was “one of the areas of [Perry’s] responsibility” and “part of [Perry’s] job” was to “deal with” “issues that can arise with electricity and gas lines.” Perry testified to having received “reports of voltage getting onto the gas lines of . . . homes and facilities on Knob Hill.” As Perry explained, the voltage was “sporadic” and “[would] go up and down to some degree, . . . things change when moisture happens,” and “the high voltages that really got [their] attention” was after “a period of several days of rain.” In 2011 or 2012, the Gas Company “reached out to [SCE] and said we need to find a solution to the stray voltage problem.” Perry further offered that the stray voltage was caused by the Topaz substation and could not be a “naturally occurring condition[ ]” because “it’s alternating current” and “[a]lternating current doesn’t occur naturally.”

SCE objected to this prior testimony as hearsay, irrelevant, lacking foundation, improper lay opinion, and unfairly prejudicial. The court sustained the objections.

### 3. *Court's Ruling on Summary Judgment*

In a lengthy written order, the court explained that the opinions of expert Loud met SCE's initial summary judgment burden of showing the Barbers could not prove their reported shocks were caused by stray voltage from SCE, and that the Barbers had not offered any admissible evidence to shift the burden back to SCE. Accordingly, the court granted summary judgment in SCE's favor on all claims for lack of causation.

The court also held that plaintiffs lacked admissible evidence on other elements of their claims. As to the negligence claim, the court relied on *Wilson I* and ruled that no duty arose on SCE's part to mitigate stray voltage at the Barbers' house because "there is no evidence the Barber[s] . . . reported" feeling shocks to SCE. As to the IIED and battery claims, the court ruled that summary judgment was proper because there was no triable issue of fact regarding SCE's conduct being intentional. Finally, the court ruled there was no triable issue as to whether any SCE officer, director or managing agent acted with oppression, fraud or malice, warranting summary judgment for SCE on the issue of punitive damages as well.

Based on the court's summary judgment ruling, judgment was entered in SCE's favor on all claims. The Barbers timely appealed.<sup>8</sup>

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<sup>8</sup> The court granted SCE summary judgment as to the three bellwether households from the consolidated action, *Richmond et al. v. Southern California Edison Co.* (Super. Ct. L.A. County, 2020, BC497689) as well, and those plaintiffs also appealed. Since that appeal was filed, however, all the *Richmond* plaintiffs—both the three bellwether households that had appealed and the remaining 17 non-bellwether households—have dismissed their cases.

## DISCUSSION

On appeal, the Barbers challenge the court's rulings on summary judgment, as well as its rulings excluding portions of Drummond's testimony and the 10 pages of transcripts from the *Wilson* case containing Kellers' and Perry's testimony. We review summary judgment rulings de novo, and in so doing "liberally" construe "the evidence in support of the party opposing summary judgment."<sup>9</sup> (*Lyle v. Warner Brothers Television Productions* (2006) 38 Cal.4th 264, 274.)

As to the court's summary judgment rulings, the Barbers first argue that the court erred in concluding there was no triable issue of fact regarding whether stray voltage attributable to SCE caused the Barbers' shocks. The Barbers contend the court applied the wrong legal standard in assessing this issue, and that SCE did not meet its burden under the correct legal standard. We disagree with both arguments, for reasons we explain below. Even if we consider the excluded *Wilson* transcripts and the excluded Drummond opinions, we nevertheless conclude that there is no triable issue of fact as to causation. We thus need not review the correctness of the rulings excluding this evidence. Nor do we need to reach the Barbers' challenges to other aspects of the court's summary judgment ruling, as the lack of a triable issue on causation precludes any cause of action from surviving summary judgment.

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<sup>9</sup> The parties disagree on the applicable standard of review for evidentiary rulings in the context of summary judgment, but we need not reach this issue, for reasons set forth below.

**A. There Is No Triable Issue As to Causation,  
Even If We Consider Drummond’s Excluded  
Opinions and the Excluded Excerpts of the  
*Wilson* Transcripts**

In order to prevail on a motion for summary judgment where, as here, the standard of proof at trial is a preponderance of the evidence, a defendant “must present evidence that would require a reasonable trier of fact *not* to find an[ ] underlying material fact [alleged by plaintiff] more likely than not”—that is, evidence that would prevent a finding of that material fact. (*Aguilar v. Atlantic Richfield Co.* (2001) 25 Cal.4th 826, 851.) The “moving party must satisfy [this] initial burden before the opposing party must controvert anything.” (*Y.K.A. Industries, Inc. v. Redevelopment Agency of City of San Jose* (2009) 174 Cal.App.4th 339, 353 (*Y.K.A. Industries*), italics omitted.) Accordingly, “ ‘a plaintiff resisting a motion for summary judgment bears no burden to establish any element of his or her case unless and until the defendant presents evidence either affirmatively negating that element (proving its absence in fact), or affirmatively showing that the plaintiff does not possess and cannot acquire evidence to prove its existence.’ ” (*Id.* at pp. 353–354.)

SCE moved for summary judgment in part based on its argument that, on the evidence in the record, the Barbers could not prove that stray voltage from the Topaz substation caused the Barbers’ shocks. To support this argument, SCE offered uncontested expert evidence that, in order for stray voltage to cause perceptible shocks in a human, a certain level of voltage is necessary, and certain conditions must be present. SCE also offered unchallenged and uncontradicted expert opinion that, at no location in the Barbers’ former home were voltage levels anywhere near the minimum level required for perceptible shock,

nor did other conditions exist that are necessary for the Barbers to have experienced shocks at the places the Barbers reported experiencing them. For example, SCE's expert opined that none of these places contained two conductive points someone could have simultaneously touched that were charged with disparate voltages of NEV from the Topaz substation.<sup>10</sup>

On a summary judgment motion, “[i]f the evidence is in conflict, the factual issues must be resolved by trial.” (*Binder v. Aetna Life Ins. Co.* (1999) 75 Cal.App.4th 832, 839.) But here, the evidence the Barbers offered in opposing summary judgment does not conflict with the evidence SCE offered establishing a lack of causation. This is the case even if we consider all of Drummond's proffered opinions and the excerpted prior testimony of Kellers and Perry, and even construing all of this evidence in the light most favorable to the Barbers. First, Drummond made clear he was offering no opinions as to whether NEV from SCE's system had caused the Barbers' shocks (or, for that matter, the shocks of any other plaintiff in this litigation). Nor, of course, can the testimony of percipient witnesses (Kellers and Perry) regarding former residents of Knobb Hill Avenue *other than the Barbers* regarding things they experienced in homes *other than the Barbers' former home* speak to this point. Second, neither Drummond nor any other expert witness disputes that the laws of physics require certain conditions, including a certain level of voltage, in order for NEV to cause a perceptible shock in a human. Similarly, neither

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<sup>10</sup> Under the Barbers' theory of causation, both contact points would presumably be charged by NEV from the Topaz substation. It is unclear from the information in the record, however, whether two contact points *must* derive their voltage from the same electricity source in order for a person touching them to experience a perceptible shock.

Drummond nor any other expert witness challenges Loud's measurements of the voltage levels in the Barbers' former home, or his assessment of other conditions in the home. Thus, even accepting Drummond's opinions that the earth surrounding the Barbers' former home and its concrete foundation necessarily conducted NEV from the Topaz substation in some amount, and even accepting his very general opinion that this is unsafe in some unspecified way and increases the chances of electrical shocks to the home's inhabitants, Drummond's opinions do not speak to whether—let alone provide a basis on which a jury could reasonably conclude that—the requisite level of voltage was present in the Barbers' former home. Nor do Drummond's opinions (or any other evidence the Barbers identify) speak to whether the conditions at any place in the Barbers' former home were such that, under the laws of physics as set forth in uncontradicted SCE expert testimony, NEV in the home could be transmitted into the body of an inhabitant in a sufficient amount to cause a perceptible shock. Kellers and Perry likewise offer no such testimony regarding the conditions in the Barbers' former home (even assuming for the moment they had any basis for offering such testimony).

We reject the Barbers' argument that their own testimony describing the shocks they experienced, combined with Drummond's opinion that the shocks the Barbers described were inconsistent with static electricity and more consistent with stray voltage, creates a triable issue on causation. Drummond's opinion that such symptoms are *consistent* with stray voltage is not tantamount to an opinion that the Barbers' symptoms actually *were* caused by stray voltage. Indeed, Drummond conceded that he had not formed any opinions as to what caused the Barbers' perceived shocks. (See fn. 6, *ante*.) Nor did Drummond opine that the Barbers' reported shocks were inconsistent with all the potential non-stray voltage



sources of such shocks identified in other expert testimony, such as faulty wiring and malfunctioning appliances. The Barbers' testimony may serve as circumstantial evidence that their shocks were *not* caused by static electricity, but evidence establishing what did not cause the shocks is insufficient to establish what *did* cause them. It therefore cannot create a triable issue on causation—especially in the face of SCE's showing that the physical prerequisites for stray voltage causing the Barbers' shocks simply were not present at the Barbers' home. (See *Ortega v. Kmart Corp.* (2001) 26 Cal.4th 1200, 1205–1206 [“ ‘[a] mere possibility of such causation is not enough; and when the matter remains one of pure speculation or conjecture, or the probabilities are at best evenly balanced, it becomes the duty of the court to direct a verdict for the defendant’ ”].) Thus, the Barbers have not rebutted SCE's initial showing that the Barbers cannot establish the conditions scientifically necessary to causally link the Barbers' shocks with stray voltage attributable to SCE.

The Barbers argue the trial court applied the wrong legal standard in its causation analysis, based on the court's reference to concepts in toxic tort cases. But the legal standard applied by the trial court is not a basis for reversal when our review is *de novo* and we determine the court's ruling is correct under the applicable standard. That is the case here. The causation analysis we set forth above applies “the ‘substantial factor’ test” that “California has adopted . . . for cause in fact determinations” (*Union Pacific Railroad Co. v. Ameron Pole Products LLC* (2019) 43 Cal.App.5th 974, 981 (*Union Pacific*)), as well as the appropriate burden-shifting framework applicable on summary judgment. (See *Y.K.A. Industries, supra*, 174 Cal.App.4th at pp. 353–354.) Because we conclude the summary judgment ruling was correct under the

appropriate legal framework, we need not address the Barbers' argument that the court applied the incorrect legal standard.

That the instant matter involves electricity does not change the foregoing causation analysis. In arguing to the contrary, the Barbers incorrectly rely on *Polk v. City of Los Angeles* (1945) 26 Cal.2d 519 (*Polk*). In *Polk*, it was undisputed that the plaintiff had suffered harm as a result of being electrocuted. (*Id.* at pp. 525–526.) Specifically, the plaintiff was electrocuted when he came into contact with the defendants' electrical wire while pruning trees. (*Id.* at p. 524.) There was no question that such contact occurred or caused the harm of which the plaintiff complained—only a discussion of whether the defendant had exercised sufficient caution in its maintenance of the wires at issue. (See *id.* at p. 525.)

The cases on which the Barbers rely in their arguments about causation either support our conclusion, or are inapposite. The Barbers cite several cases not involving causation as examples of the general proposition that, “[w]here . . . the defendant fails to meet its burden of negating a necessary element of plaintiff’s claim, courts reverse summary judgment.” (See *Mackey v. Trustees of California State University* (2019) 31 Cal.App.5th 640, 667–668 [where several plaintiffs left college team and “attribut[ed] [their] departure . . . to . . . allegedly discriminatory treatment” of the coach, “a reasonable trier of fact could . . . conclude” one teammate plaintiff who did not leave nevertheless “suffered a materially adverse action[, because] the departures of her peers suggests a sufficient severity or pervasiveness of [such] treatment to withstand summary judgment”]; *Lane v. City of Sacramento* (2010) 183 Cal.App.4th 1337, 1346 (*Lane*) [defendant City’s evidence regarding the low number of reported accidents involving a particular street divider “was not sufficient to preclude a reasonable trier of fact from

finding the divider posed a substantial risk of injury” because accidents could have occurred but not been reported]; *Jeewarat v. Warner Bros. Entertainment Inc.* (2009) 177 Cal.App.4th 427, 431 [because “an employee's attendance at an out-of-town business conference may be considered a special errand . . . the employer failed to show that the employee was not acting within the course and scope of his employment at the time of the accident, summary judgment was improperly granted”].) But unlike in these cases, SCE *has* provided evidence negating an element of the Barbers’ claims, and the Barbers have not offered contrary evidence or evidence discrediting SCE’s evidence.

The cases the Barbers cite that do involve causation are inapposite. These cases involve a defendant’s efforts to negate the element of causation on summary judgment by establishing an alternative cause of the plaintiff’s injury or accident. (See *Union Pacific, supra*, 43 Cal.App.5th at pp. 981–982 [defendant’s showing that the accident at issue would have occurred, even absent defendant’s action, did not prevent finding that there was a causal nexus between defendant’s conduct and plaintiff’s injuries in the accident]; *Cole v. Town of Los Gatos* (2012) 205 Cal.App.4th 749, 769 [defendant “could not establish an entitlement to summary judgment merely by showing that [a driver’s] inebriation was a cause of plaintiff’s injuries” and instead “had to establish . . . that plaintiff would be unable to present evidence that any condition of the public property where the accident occurred was also a substantial causative factor in bringing about her injuries,” italics omitted].) SCE did not seek summary judgment by attempting to prove alternative causes or additional contributing causes for the Barbers’ claimed shocks, so these cases are inapplicable. Rather, as required by the cases on which the Barbers rely, SCE “‘present[ed] evidence that would preclude a reasonable trier of fact from finding

that it was more likely than not that’ ” stray voltage caused the Barbers’ shocks. (*Lane, supra*, 183 Cal.App.4th at p. 1343.)

**B. Res Ipsa Loquitor Does Not Provide a Basis for Reversal**

Finally, we find the Barbers’ res ipsa loquitor arguments unconvincing. Where it applies, the doctrine of res ipsa loquitor permits a finder of fact to infer that something was caused by the defendant’s negligence, despite the lack of any evidence establishing such negligence or causation. (See *Brown v. Poway Unified School Dist.* (1993) 4 Cal.4th 820, 825 (*Brown*).) The Barbers argue that the doctrine applies here and permits them to establish causation without actually proving causation in fact—and thus to survive summary judgment despite SCE’s showing that they cannot establish causation in fact. We disagree.

The doctrine of res ipsa loquitor applies where the evidence satisfies three conditions: “ ‘(1) the accident [or injury] must be of a kind which ordinarily does not occur in the absence of someone’s negligence; (2) it must be caused by an agency or instrumentality within the exclusive control of the defendant; (3) it must not have been due to any voluntary action or contribution on the part of the plaintiff.’ ” [Citation.]” (*Brown, supra*, 4 Cal.4th at pp. 825–826.) We note at the outset that, although it is a subject of some debate between the experts,<sup>11</sup> there is evidence in the record suggesting that the type of shocks the Barbers describe *can* have non-negligent

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<sup>11</sup> That there is conflicting evidence in the record as to whether the symptoms the Barbers described were consistent with being caused by some of these alternative sources does not mean the Barbers have established the first element of res ipsa loquitor. In any event, we need not decide this issue, given our conclusion that even if the doctrine applied, SCE’s evidence would rebut the presumption the doctrine creates.

sources outside of SCE's control, such as static electricity, EMFs, faulty wiring, and malfunctioning appliances.

Nevertheless, even assuming, for the sake of argument, that the Barbers have established these elements and the *res ipsa loquitor* doctrine applies, "the *res ipsa loquitor* presumption disappears" when, as here, "the defendant produces evidence sufficient to sustain a finding that . . . any negligence on [the defendant's] part was not a proximate cause of plaintiff's injury." (*Frantz v. San Luis Medical Clinic* (1978) 81 Cal.App.3d 34, 44.) SCE offered precisely such evidence in moving for summary judgment, as set forth above. Because of this uncontradicted evidence, even if the elements of *res ipsa loquitor* had been satisfied, the Barbers must still prove causation in fact, and have failed to offer evidence based on which, in light of SCE's summary judgment showing, they could do so.

In sum, "[c]ausation is generally a question of fact for the jury, unless reasonable minds could not dispute the absence of causation." (*Lombardo v. Huysentruyt* (2001) 91 Cal.App.4th 656, 666.) There is no such possibility of dispute in this case. SCE is "entitled to summary judgment based on a lack of causation" because Loud's uncontradicted, unquestioned testimony regarding the absence of physical prerequisites for proving causation in this case "conclusively negate[s]" such causation. (*Union Pacific, supra*, 43 Cal.App.5th at p. 981.)

### **DISPOSITION**

The judgment is affirmed. Respondents are awarded their costs on appeal.

ROTHSCHILD, P. J.

We concur:

CHANEY, J.

BENDIX, J.

Filed 6/24/22

**CERTIFIED FOR PUBLICATION**

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

SECOND APPELLATE DISTRICT

DIVISION ONE

LORI BARBER et al.,

Plaintiffs and Appellants,

v.

SOUTHERN CALIFORNIA  
EDISON COMPANY,

Defendant and Respondent.

B305585, B305587

(Los Angeles County  
Super. Ct. Nos. BC497689,  
YC066729)

CERTIFICATION AND  
ORDER FOR PUBLICATION

**THE COURT:**

The opinion in the above-entitled matter filed on May 27, 2022 was not certified for publication in the Official Reports. For good cause, it now appears that the opinion should be published in the Official Reports and it is so ordered.

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ROTHSCHILD, P. J.

CHANEY, J.

BENDIX, J.